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SEQUENCE LISTING

<110> Boylan, John
Bowers, Alex

<120> Novel Serine Threonine Kinase Member, h2520-59

<130> 01017/36524A

<140> US/09/909,474

<141> 2001-07-19

<150> US 60/219,204

<151> 2000-07-19

<160> 15

<170> PatentIn version 3.0

<210> 1

<211> 2059

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (49)..(1122)

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acc cct ctg gct gct cct gcg ggt tcc ctg tcc agg aag aag cgg ttg 105
Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys Lys Arg Leu
5 10 15

gag ttg gat gac aac tta gat acc gag cgt ccc gtc cag aaa cga gct 153
Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala
20 25 30 35

cg a agt ggg ccc cag ccc aga ctg ccc ccc tgc ctg ttg ccc ctg agc 201
Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu Pro Leu Ser
40 45 50

cca cct act gct cca gat cgt gca act gct gtg gcc act gcc tcc cgt 249
Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr Ala Ser Arg
55 60 65

ctt ggg ccc tat gtc ctc ctg gag ccc gag gag ggc ggg cgg gcc tac 297
Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly Arg Ala Tyr
70 75 80

cg g gcc ctg cac tgc cct aca ggc act gag tat acc tgc aag gtg tac 345
Arg Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys Lys Val Tyr
85 90 95

ccc gtc cag gaa gcc ctg gcc gtg ctg gag ccc tac gcg cgg ctg ccc 393
Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala Arg Leu Pro
100 105 110 115

ccg cac aag cat gtg gct cgg ccc act gag gtc ctg gct ggt acc cag 441
Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala Gly Thr Gln
120 125 130

ctc ctc tac gcc ttt ttc act cgg acc cat ggg gac atg cac agc ctg 489
Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met His Ser Leu
135 140 145

gtg cga agc cgc cac cgt atc cct gag cct gag gct gcc gtg ctc ttc 537
Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala Val Leu Phe
150 155 160

cgc cag atg gcc acc gcc ctg gcg cac tgt cac cag cac ggt ctg gtc 585
Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His Gly Leu Val
165 170 175

ctg cgt gat ctc aag ctg tgt cgc ttt gtc ttc gct gac cgt gag agg 633
Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp Arg Glu Arg
180 185 190 195

aag aag ctg gtg ctg gag aac ctg gag gac tcc tgc gtg ctg act ggg 681
Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val Leu Thr Gly
200 205 210

cca gat gat tcc ctg tgg gac aag cac gcg tgc cca gcc tac gtg gga 729
Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala Tyr Val Gly
215 220 225

cct gag ata ctc agc tca cgg gcc tca tac tgc ggc aag gca gcc gat 777
Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys Ala Ala Asp
230 235 240

gtc tgg agc ctg ggc gtg gcg ctc ttc acc atg ctg gcc ggc cac tac 825
Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala Gly His Tyr
245 250 255

ccc ttc cag gac tgc gag cct gtc ctg ctc ttc ggc aag atc cgc cgc 873
Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys Ile Arg Arg
260 265 270 275

ggg gcc tac gcc ttg cct gca ggc ctc tgc gcc cct gcc cgc tgt ctg 921
Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala Arg Cys Leu
280 285 290

gtt cgc tgc ctc ctt cgt cgg gag cca gct gaa cgg ctc aca gcc aca 969
Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu Thr Ala Thr
295 300 305

ggc atc ctc ctg cac ccc tgg ctg cga cag gac ccg atg ccc tta gcc 1017
Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met Pro Leu Ala
310 315 320

cca acc cga tcc cat ctc tgg gag gct gcc cag gtg gtc cct gat gga 1065
Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val Pro Asp Gly
325 330 335

ctg ggg ctg gac gaa gcc agg gaa gag gag gga gac aga gaa gtg gtt 1113
Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg Glu Val Val
340 345 350 355

ctg tat ggc taggaccacc ctactacacg ctcagctgcc aacagtggat 1162
Leu Tyr Gly

tgagtttggg ggtagctcca agccttctcc tgcctctgaa ctgagccaaa ccttcagtgc 1222
 cttccagaag ggagaaaggc agaagcctgt gtggagtgtg ctgtgtacac atctgctttg 1282
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 <213> Homo sapiens

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Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
 20 25 30

Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
 35 40 45

Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
 50 55 60

Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
 65 70 75 80

Arg Ala Tyr Arg Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
 85 90 95

ai

Lys Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala
100 105 110

Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
115 120 125

Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
130 135 140

His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
145 150 155 160

Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
165 170 175

Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
180 185 190

Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
195 200 205

Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
210 215 220

Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys
225 230 235 240

Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala
245 250 255

Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys
260 265 270

Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala
275 280 285

Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu
290 295 300

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met
305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val
325 330 335

Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg
340 345 350

a

Glu Val Val Leu Tyr Gly
355

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<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 3
tgggtgctgga gaacctggag g

21

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cgagtcctgg aaggggtagt g

21

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<223> HIV TAT peptide

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Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg
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cggggcgaga tgcgagccac

20

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 <213> Homo sapiens

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Met Arg Ala Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys
 1 5 10 15
 Lys Arg Leu Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln
 20 25 30
 Lys Arg Ala Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu
 35 40 45
 Pro Leu Ser Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr
 50 55 60
 Ala Ser Arg Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly
 65 70 75 80
 Arg Ala Tyr Gln Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys
 85 90 95
 Lys Val Tyr Pro Val Gln Glu Ala Pro Ala Val Leu Glu Pro Tyr Ala
 100 105 110
 Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala
 115 120 125
 Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met
 130 135 140
 His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala
 145 150 155 160
 Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His
 165 170 175
 Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp
 180 185 190
 Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val
 195 200 205
 Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala
 210 215 220
 Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys
 225 230 235 240
 Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala
 245 250 255
 Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys
 260 265 270
 Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala
 275 280 285
 Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu
 290 295 300

ai

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met
305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val
325 330 335

Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg
340 345 350

Glu Val Val Leu Tyr Gly
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Gln Arg Lys Trp Arg Arg Leu Arg Ala Arg Pro Leu Leu Gly Pro Gly
20 25 30

Gln Gly Trp Ser Trp Ala Gly Ile Pro Ser Ser Ala Ala Ala Gln Arg
35 40 45

Ala Gly Pro Pro Ala Gly Ala Leu Glu Ala Leu Ser Pro Gly Gly Ala
50 55 60

Arg Ala His Ala Glu Arg Arg Gly Glu Met Arg Ala Thr Pro Leu Ala
65 70 75 80

Ala Pro Ala Gly Ser Leu Ser Arg Lys Lys Arg Leu Glu Leu Asp Asp
85 90 95
Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala Arg Ser Gly Pro
100 105 110
Gln Pro Arg Leu Pro Pro Cys Leu Leu Pro Leu Ser Pro Pro Thr Ala
115 120 125
Pro Asp Arg Ala Thr Ala Val Xaa Thr Xaa Ser Arg Xaa Xaa Xaa Tyr
130 135 140
Val Leu Leu Glu Ala Arg Arg Xaa Ala
145 150

<210> 10
<211> 233
<212> PRT
<213> Homo sapiens

<400> 10

Gly Pro Gly Trp Tyr Pro Ala Pro Leu Arg Leu Phe His Ser Asp Pro
1 5 10 15
Trp Gly His Ala Gln Pro Gly Ala Lys Arg His Arg Ile Pro Glu Pro
20 25 30
Glu Ala Ala Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys
35 40 45
His Gln His Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val
50 55 60
Phe Ala Asp Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp
65 70 75 80
Ser Cys Val Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala
85 90 95
Cys Pro Ala Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr
100 105 110
Ser Gly Lys Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr
115 120 125
Met Leu Ala Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu
130 135 140
Phe Gly Lys Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser
145 150 155 160
Ala Pro Ala Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala
165 170 175
Glu Arg Leu Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln
180 185 190
Asp Pro Met Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala
195 200 205
Gln Val Val Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu
210 215 220

Gly Asp Arg Glu Val Val Leu Tyr Gly
225 230

<210> 11
<211> 360
<212> PRT
<213> Homo sapiens

<400> 11

Gly Gln Gly Trp Ser Trp Ala Gly Ile Pro Ser Ser Ala Ala Ala Gln
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Arg Ala Gly Pro Pro Ala Gly Ala Leu Glu Ala Leu Ser Pro Gly Gly
20 25 30
Ala Arg Ala His Ala Glu Arg Arg Gly Glu Met Arg Ala Thr Pro Leu
35 40 45
Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys Lys Arg Leu Glu Leu Asp
50 55 60
Asp Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala Arg Ser Gly
65 70 75 80
Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu Pro Leu Ser Pro Pro Thr
85 90 95
Ala Pro Asp Arg Ala Thr Ala Val Ala Thr Ala Ser Arg Leu Gly Pro
100 105 110
Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly Arg Ala Tyr Gln Ala Leu
115 120 125
His Cys Pro Thr Gly Thr Glu Tyr Thr Cys Lys Val Tyr Pro Val Gln
130 135 140
Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala Arg Leu Pro Pro His Lys
145 150 155 160
His Val Ala Arg Pro Thr Glu Val Leu Ala Gly Thr Gln Leu Leu Tyr
165 170 175
Ala Phe Phe Thr Arg Thr His Gly Asp Met His Ser Leu Val Arg Ser
180 185 190
Arg His Arg Ile Pro Glu Pro Glu Ala Ala Val Leu Phe Arg Gln Met
195 200 205
Ala Thr Ala Leu Ala His Cys His Gln His Gly Leu Val Leu Arg Asp
210 215 220
Leu Lys Leu Cys Arg Phe Val Phe Ala Asp Arg Glu Arg Lys Lys Leu
225 230 235 240
Val Leu Glu Asn Leu Glu Asp Ser Cys Val Leu Thr Gly Pro Asp Asp
245 250 255
Ser Leu Trp Asp Lys His Ala Cys Pro Ala Tyr Val Gly Pro Glu Ile
260 265 270
Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys Ala Ala Asp Val Trp Ser
275 280 285

Leu Gly Val Ala Leu Phe Thr Met Leu Ala Gly His Tyr Pro Phe Gln
290 295 300

Asp Ser Glu Pro Val Leu Leu Phe Gly Lys Ile Arg Arg Gly Ala Tyr
305 310 315 320

Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala Arg Cys Leu Val Arg Cys
325 330 335

Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu Thr Ala Thr Gly Ile Leu
340 345 350

Leu His Pro Trp Leu Arg Gln Asp
355 360

<210> 12

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<212> DNA

<213> Homo sapiens

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gacctgagat actcagctca cgggcctcat actcggggcaa ggcagccgat gtctggagcc 180
tgggcgtggc gctcttcacc atgctggccg gccactaccc cttccaggac tcggagcctg 240
tcctgctctt cggcaagatc cgccgcgggg cctacgcctt gcctgcaggc ctctcggccc 300
ctgcccgtg tctggttcgc tgccctcttc gtcgggagcc agctgaacgg ctcacagcca 360
caggcatcct cctgcacccc tggctgcgac aggaccgat gcccttagcc ccaacccgat 420
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aagaggaggg agacagagaa gtggttctgt 510

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<212> PRT

<213> Homo sapiens

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Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala
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Arg Ser Gly Pro Gln Pro Arg Leu Cys
20 25

<210> 14

<211> 25

<212> PRT

<213> Homo sapiens

<400> 14

Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly Arg Ala Tyr Gln
1 5 10 15

Ala Leu His Cys Pro Thr Gly Thr Glu
20 25

<210> 15

<211> 25

<212> PRT

<213> Homo sapiens

<400> 15

Arg Ser His Leu Trp Glu Ala Ala Gln Val Val Pro Asp Gly Leu Gly
1 5 10 15

Leu Asp Glu Ala Arg Glu Glu Glu Cys
20 25